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(19) **United States**(12) **Patent Application Publication****Chung et al.**(10) **Pub. No.: US 2012/0088731 A1**(43) **Pub. Date: Apr. 12, 2012**(54) **METHOD FOR TREATING PARKINSON'S DISEASE THROUGH REGULATING VDAC1 PROTEIN**(75) Inventors: **Jongkyeong Chung**, Daejeon (KR);
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Seoul (KR)(21) Appl. No.: **13/001,658**(22) PCT Filed: **Oct. 14, 2010**(86) PCT No.: **PCT/KR10/07052**

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The present invention provides a method for curing Parkinson's disease through regulating VDAC1 (voltage-dependent anion channel 1) protein. Specifically, the present invention provides a pharmaceutical composition for curing PD comprising a VDAC1 protein regulator. The VDAC1 protein regulators comprise an inhibitor of VDAC1 mRNA production, an inhibitor of mitochondrial permeability transition pore (mPTP) formation, and a mitochondrial calcium uptake inhibitor. In addition, the present invention provides a method for curing Parkinson's disease comprising administering a VDAC1 protein regulator to a subject with Parkinson's disease. The present invention could provide a method for curing Parkinson's disease through preventing and/or restoring mitochondrial dysfunction.